O. ELLSWORTH.

CURTAIN-ROLLER AND BRACKET.

No. 170,072. Patented Nov. 16, 1875.

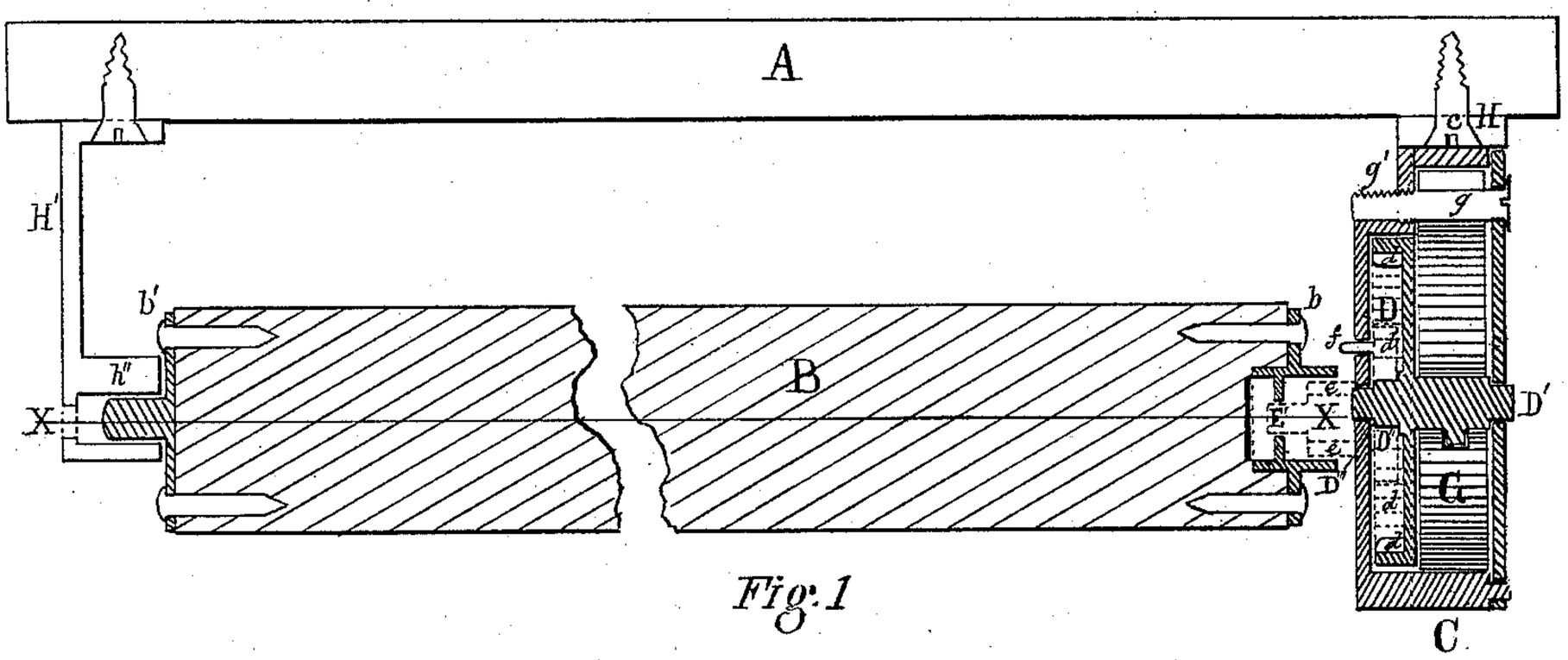


Fig: 1

Fig: 2.

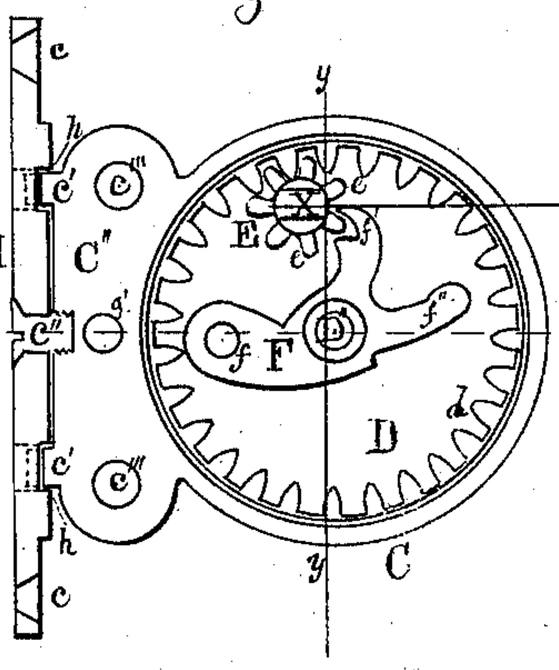
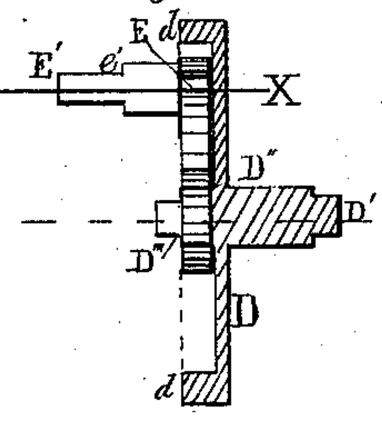


Fig: 3.



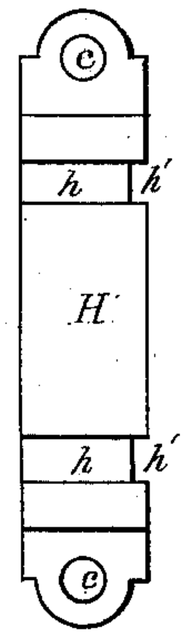


Fig: 2a

Fig: 6.

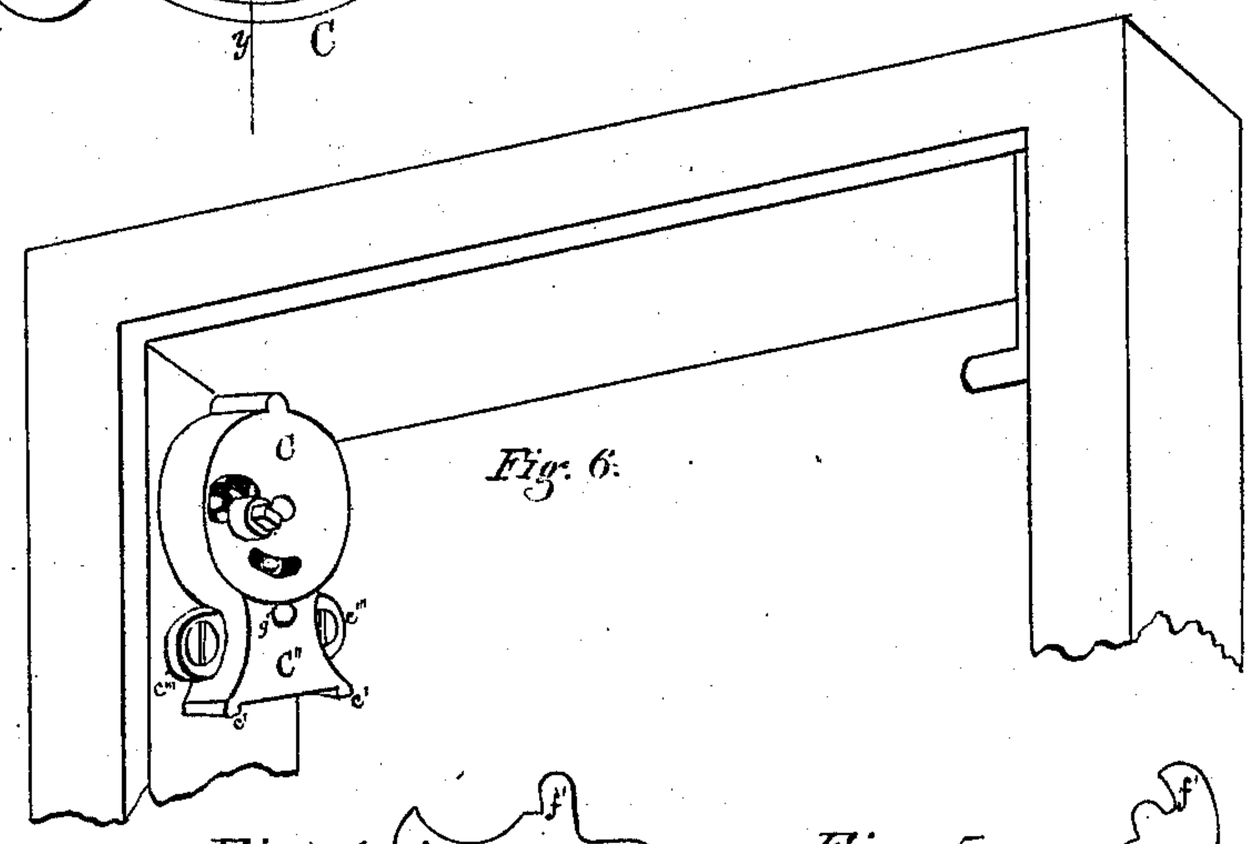


Fig. 4.

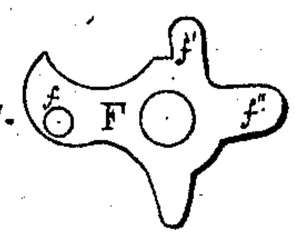
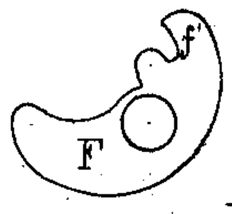


Fig. 5.



Attest

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UNITED STATES PATENT OFFICE.

OLIVER ELLSWORTH, OF NEWTON, MASSACHUSETTS.

IMPROVEMENT IN CURTAIN ROLLERS AND BRACKETS.

Specification forming part of Letters Patent No. **170,072**, dated November 16, 1875; application filed May 11, 1875.

To all whom it may concern:

Be it known that I, OLIVER ELLSWORTH, of Newton, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Curtain-Fixtures; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a section through the center of the roller and the pinion, as seen at *x x* in Figs. 2 and 3. Fig. 2 is an interior view of the bracket, showing the gear-wheel, pinion, and dog; also the method of joining the foot to the bracket. Fig. 2ª is a face view of the foot. Fig. 3 is a section of the bracket on *y y* of Fig. 2. Figs. 4 and 5 are modifications of the dog. Fig. 6 is a perspective view, showing the change to make an inside fixture.

The nature of this invention relates to the manner of fastening the spring-bracket to the foot-piece, so that the bracket may be readily detached, and, without the foot, be secured to the inside jamb of a window; also, to the dog or ratchet, which is counterbalanced, all of which will be more fully hereinafter described.

In the drawing, A is the upper frame or casing of a window. B is the roller, on which is fastened the shade. C is the shell or metallic case, in which are the spring-gear, dog, &c., having a waist, C″, with eyes *c‴ c‴*. D is the gear-plate, having teeth on the inside of the rim or flange. D′ is the hub cast with the plate, having a raised washer, D″, and a shoulder, D‴, at the inner end, and a similar shoulder at the opposite end at D′, Fig. 1. E is the pinion; E′, the stem of the pinion, flattened at the end to suit the socket in the end of the roller-plate having a shoulder at *e′*. F is a dog or ratchet, which is pivoted on the hub, and operates by its tooth *f′* upon the cogs *e* of the pinion-wheel E. This dog F, as seen in Fig. 2, has a counterweight or arm, *f″*, a ratchet-tooth, *f′*, and a pin, *f*, which protrudes outside of the cap-plate, as seen at *f* in Fig. 1.

The devices shown in Figs. 4 and 5 are modifications of the one just described.

G is a spring coiled in the outer part of the box or case C, its inner end being fastened by a mortise-notch to a pin on the surface of the hub D′. The outer end of the spring G is looped, and the screw *g* passes through it and secures it to the casing at *g′*. H is the foot-piece having in it grooves *h h* and notches *h″*. In these grooves and notches are fitted the projecting ridges and ribs *c′ c′* on the waist C″ of the spring-bracket, as seen in Fig. 2. This plate H is secured to the spring-bracket by a small countersunk screw, *c″*, and is secured to the window-casing by wood-screws *c c*. H′ is a metallic bracket fastened to the casing by wood-screws in the usual manner, and has a socket, *h″*, in which is pivoted the end bearing-plate *b′* of the roller.

When the fixture is to be used for inside jambs, the foot-piece H is removed. The bracket C has two eyes, *c‴*, in the lower plate or waist C″, through which wood-screws can be passed to fasten the bracket to the inside casing or jamb, and a corresponding bracket with a socket to receive the other end pivot is screwed to opposite jamb.

When this is done the bracket does not hold the same position as when used for an outside fixture, but is turned one-quarter around.

The advantages of this fixture over those now in use is in the facility of converting it into an inside from an outside fixture simply by removing the foot-piece. Also, in the dog being counterweighted, so that it always acts upon the teeth of the pinion, and arrests with certainty the shade within a small space where it may be desired, say, within three-quarters of an inch movement of the shade.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The foot H, with the grooves *h* and *h′*, and the spring-bracket with ribs and guides *c′*, all constructed substantially as and for the purpose described.

2. The counterbalanced dog F suspended to the spindle of a main gear-wheel, in combination with the pinion-wheel E.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

OLIVER ELLSWORTH.

Witnesses:

LEVI H. STRAW,

B. F. SPARROW.